

**To:** Steve Tink[RITIN@statoil.com]  
**From:** Justice, James  
**Sent:** Mon 2/23/2015 8:36:43 PM  
**Subject:** U.S. EPA Comments to Eisenbarth Draft Work Plan

Good Afternoon Steve,

I hope all is well with you.

Below are the U.S. EPA comments to the Draft Work Plan Revision. The formal letter will be going out tomorrow or the next day but I wanted to send you an informal copy and let you know the letter will be coming shortly.

The letter approves the Work Plan with the requested changes below. Please let me know if you have any questions or concerns at any time and I would be happy to discuss them with you.

#### **GENERAL COMMENTS/REVISIONS:**

1. Some portions of the work to be performed as part of the AOC can begin prior to the completion of any remedial activities of the Eisenbarth Well Pad as long as existing containment measures are maintained. Please note that pursuant to Section VIII, paragraph 18-c of the AOC, U.S. EPA shall be notified a minimum of 3 days before any sample collection activity.

2. U.S. EPA requests to be notified in advance of the discontinuation of containment and collection activities at the outfalls that service the Eisenbarth Well Pad.

#### **WORK PLAN:**

**Section 15.a.i, Proposed future actions for 15.a.i:**

1. Additional data provided to U.S. EPA following the submission of the revised Work Plan identified the presence of TTPC in subsurface soils at depth. In one case as deep as 28-30 feet below ground surface. No TTPC detections have been observed in ground water samples to date. The presence of TTPC at depth indicates that there is a possibility for migration. In order to continue to monitor for potential migration pathways off-site, U.S. EPA requests the following:

- a. All outfalls and installed water monitoring wells be sampled quarterly for at least one year to monitor for potential subsurface migration.
- b. The two nearest private residential wells (north and south of Well Pad) be included in this quarterly sampling.
- c. Once groundwater direction is established and presented to U.S. EPA, additional private residential wells may be added to the quarterly monitoring.

#### **Section 15.a.ii, Proposed future actions for 15.a.ii:**

1. U.S. EPA requests that the 3 sampling events be conducted following the discontinuation of containment present at the outfalls serving the Eisenbarth Well Pad.

- a. The three sampling events shall be conducted only after containment is discontinued at the outfalls.

2. Please change the Spring 2015 sampling event to Fall 2015.

3. The proposed sampling locations are acceptable with the following qualifiers/clarifications:

- a. It is unclear by the written descriptions of the 11 sampling locations that all four of the outfalls from the Well Pad, shown on the Existing Drainage Locations Figure, are covered. Sample points PD07 and SW24 appear to cover the western outfalls. PD03 appears to possibly cover one of the outfalls south of the Well Pad but none of the locations appear to cover the 12" HDPE pipe that receives flow from the 4" underdrain along the southern edge of the Well Pad. Please confirm what sample points cover the two southern outfalls and add an additional point if needed.

- b. Please submit the proposed background locations on Opossum and Sunfish Creeks for review prior to the first sampling event of these and the other 11-12 locations.

4. Sampling of collection points at the outfalls should continue at least monthly until containment is discontinued.

**Section 15.a.iii, Proposed future actions for 15.a.iii:**

1. WET Testing:

- a. Review of the data indicates TTPC in the collected water from the Well Pad is at similar concentrations to surface waters or non-detect, please collocate the WET sample location with SW04 selected for the WST testing.
- b. U.S. EPA requests Chronic WET Testing be conducted as well using the procedures described in "Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, EPA-821-R-02-013" or "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms, EPA-821-R-02-012."
- c. For both the acute and chronic both no-observed-adverse-affect-levels (NOAELs) and lowest-observed-adverse-affect-levels (LOAELs) should be determined.

2. WST Testing:

- a. U.S. EPA requests Chronic WST Testing be conducted as well using the *Hyalela Azteca* 42 day test for measuring the effects of sediment associated contaminants on survival, growth and reproduction and the life cycle test for measuring the effects of sediment associated contaminants on *Chironomus dilutes*. These tests should be run in accordance with "Methods for Measuring the Toxicity and Bioaccumulation of Sediment-associated Contaminants with Freshwater Invertebrates, EPA 600/R-99/064."
- b. NOAELs and LOAELs should be determined.

3. Schedule:

U.S. EPA requests that WET and WST testing be conducted in 2015.

Sincerely,

JJ Justice  
On-Scene Coordinator

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